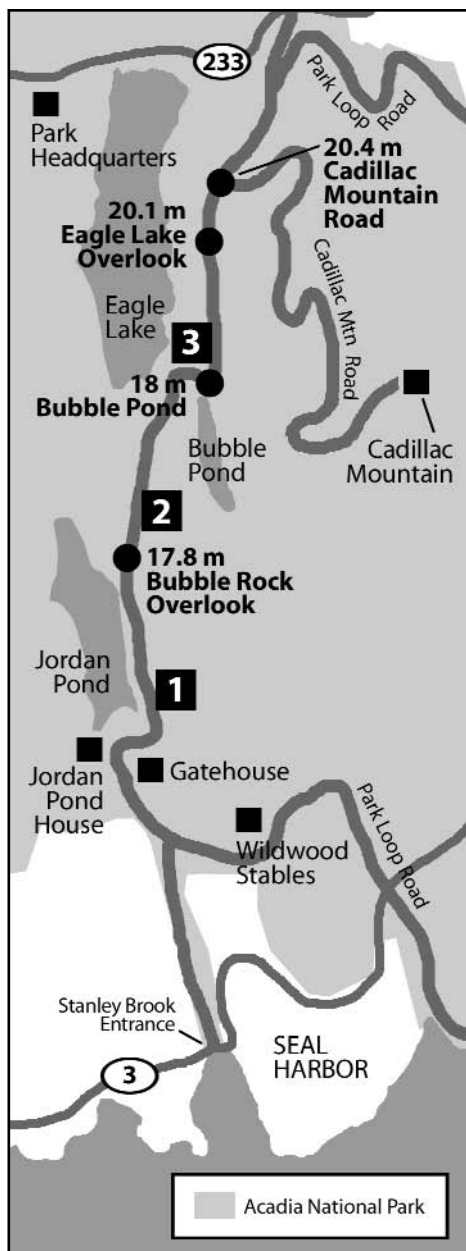
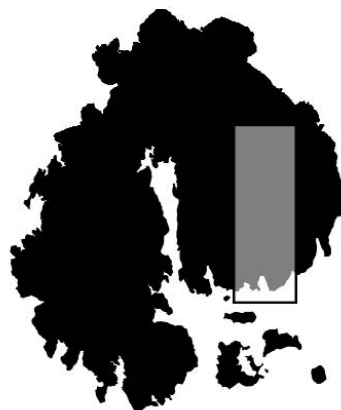


## SECTION TWO – PARK SITES

### Chapter Nine – Park Loop Road Jordan Pond to Cadillac Mountain Road (Lower Mountain Road)



- 1** The Pond Trail  
The Triad
- 2** South Bubble Trail  
North Bubble Trail
- 3** Carriage Roads  
Pemetic Mountain Trail  
West Ridge Cadillac Trail  
Carry Trail





## **Before You Go – What to Know Jordan Pond to Cadillac Mountain Road (Lower Mountain Road) Logistics**

### **LOCATION**

This four mile road section runs through Acadia's eastern interior from Jordan Pond to the start of the Cadillac Mountain Road. The road is two-way.

### **AREA HIGHLIGHTS**

#### **Bubble Rock**

Large glacial boulder perches above the Park Loop Road on South Bubble Mountain. Hiking is the only way to see Bubble Rock up close. It can be viewed from a distance below on the Park Loop Road.

#### **Bubble Pond**

A scenic pond nestled between Cadillac and Pemetic Mountains.

#### **Eagle Lake Overlook**

Expansive view of Eagle Lake and the western horizon.

### **TIME ALLOTMENT**

- *Approximate driving time with brief stops at Bubble Rock overlook and Eagle Lake overlook: 15 minutes*
- *Bubble Pond Visit: half hour (tour buses cannot park at Bubble Pond due to small parking lot)*

### **PARKING**

- There is no parking along the road side on this stretch of the Park Loop Road except for two pullouts: Bubble Rock Overlook (space for six vehicles) and Eagle Lake Overlook (space for six vehicles).
- Bubble Rock and Bubble Pond each have a small parking lot for approximately 20 vehicles. Both of these lots are often full by mid-morning in the summer.
- Bubble Pond parking lot cannot accommodate tour buses at any time.

### **FACILITIES**

There is a vault toilet in the Bubble Pond parking area. A few picnic tables are available at the pond's northern end, just beyond the parking area.

## **ACCESSIBILITY**

Bubble Pond is accessible. A paved path with a slight slope leads to the pond's edge.

## **SAFETY**

- The two-way traffic on this narrow road requires drivers to use extra caution, especially around cyclists. There is no shoulder. The road's speed limit is 35 mph with a reduced speed of 25 mph in the Bubble Pond area.
- If parking at Bubble Pond, please do not park on the edge of the roadway entering the parking lot! If the lot is full, try to return at another time. Once one car parks on the side, others follow, causing dangerous congestion.
- If walking on the carriage roads, please be alert for cyclists.
- Cyclists, please slow your speed and watch for walkers and horseback riders.

## **TRAILHEADS**

For descriptions and distances of trails, check the Recreation section on page 43.

### **Small pull-out on left after Jordan Pond site on Park Loop Road**

- *The Pond Trail*
- *The Triad*

### **Bubble Rock Parking**

- *South Bubble Trail*
- *North Bubble Trail*

### **Bubble Pond Parking**

- *Pemetic Mountain Trail*
- *West Face Cadillac Trail*
- *Carry Trail to South Bubble/ North Bubble*

### **Carriage Roads from Bubble Pond**

Check carriage road loop descriptions in Recreation section.

- *Bubble Pond to Jordan Pond*
- *Eagle Lake*



## **At a Glance**

### **Jordan Pond to Cadillac Mountain Road (The Lower Mountain Road)**

#### **SIGNIFICANCE**

The Jordan Pond–Eagle Lake Road, completed in 1925, was the first section of the Park Loop Road. It allowed for many more people to experience some of Acadia's most spectacular mountain and lake scenery. Known today as the Lower Mountain Road, this four mile section runs from Jordan Pond to the junction of the three and a half mile Cadillac Mountain Road, providing access to trailheads, carriage roads, Bubble Pond, and views of Jordan Pond, Bubble Rock, and Eagle Lake.

#### **FAST FACTS**

- Bubble Rock is a fourteen-ton glacial erratic transported by ice from 20 miles to the northwest of its current location.
- Visiting artists named Eagle Lake in the mid-1800s for eagles flying overhead.
- Bubble Pond is 32 acres in size and 30 feet deep. Eagle Lake is 436 acres in size and 110 feet deep at its deepest point. The park monitors both for water quality.
- Acadia's lakes and ponds are stocked with fish by the Maine Department of Inland Fisheries and Wildlife. This is because of legislation in the 1600s giving the state (then part of Massachusetts Bay Colony) jurisdiction of waters greater than 10 acres in size.

#### **PROTECTING YOUR PARK – HOW YOU CAN HELP**

Remember to follow *Leave No Trace* principles. In particular:

- Keep to the trail so vegetation is not trampled. Mountain bikes are prohibited on hiking trails but may be used on park carriage roads (except to the south of Jordan Pond).
- The smooth bark of the beech trees around the South Bubble trail and in all the park needs protection from would-be carvers. Please—keep your initials to yourself.
- Watch your butts! The sandy shore at Bubble Pond is not a large ashtray. Cigarette butts are litter and can harm wildlife as well as look unsightly. Please be sure to pack out all trash.
- Bubble Pond is a natural draw for picnickers—who in turn become a draw for wildlife. Birds, red squirrels, and chipmunks can easily capture the attention of well-meaning visitors. Do not feed them—they are not adapted for our foods and feeding can make them reliant on humans.
- Restrooms are found at Jordan Pond and the Cadillac Mountain summit. Vault toilets are available at Bubble Pond. Please use appropriate facilities.

## **HELPFUL INFORMATION**

### **JORDAN POND TO CADILLAC MOUNTAIN ROAD**

#### **Fact Sheets:**

Amphibians 3-34  
Acadia's Fishery 3-39  
Plant Groups of Acadia National Park 3-43  
Caring for Acadia's Native Plants 3-47  
Acadia's Common Plants 3-50  
Geology 3-66  
Water Quality 3-88  
Visitor Use 3-98  
Park History 3-105  
Carriage Roads of Acadia National Park 3-108

#### **Appendix:**

Lakes and Ponds (D)  
Mountains (D)  
Acadia National Park Timeline (E)  
Quotes (E)  
Who's Who at Acadia (E)  
Carriage Road Bridges (F)



## **Background Information/Narrative Jordan Pond to Cadillac Mountain Road (Lower Mountain Road)**

Mileages taken from visitor center as driven around entire loop.

### **JORDAN POND TO BUBBLE ROCK OVERLOOK**

*No planned stops.*

Often the last portion of the Park Loop Road to be traveled, the Lower Mountain Road was actually the first section completed. Originally called the Jordan Pond-Eagle Lake Road, it was funded by the federal government and by donations from John D. Rockefeller Jr. Rockefeller saw the development of motor roads as a way to keep automobiles off the carriage roads, while George Dorr, the park's first superintendent saw motor roads as the direction of the future to provide access into Acadia's heart.

The building of the Park Loop Road was not without controversy. Some summer residents felt any network of roads would ruin the wilderness quality of the island's interior. With those dissenting voices in mind, and the perfection standards inherent in Rockefeller's involvement, high road-building standards maintained the landscape's integrity. Opened in 1925, the road was developed to blend with its natural surroundings, right down to the road's one-time surface of crushed pink granite.

As the Park Loop Road ascends from Jordan Pond and hugs the base of Pemetic Mountain, the pond lies below. A carriage road above the pond's western shore stretches through a large jumble of talus and boulders at the base of Penobscot Mountain, demonstrating the design and construction skills of the carriage road engineers. As South Bubble comes into view, Bubble Rock, perched on the mountain's southern side, looms above the Park Loop Road.

### **BUBBLE ROCK OVERLOOK**

*Passengers stay on bus.*

#### **Location**

*Mile 17.8 on the left hand side of the road.*

#### **Parking**

A small pull-off with spaces for approximately six cars offers a view of the rock from below. It may be best to slow down and have your group look from the bus.

NOTE: Interpretive Sign

Although Acadia's landscape is littered with erratics (rocks deposited from glacial ice), this 14-ton boulder, the size of a cargo van, is perhaps Acadia's best known "rock from away." The granite boulder's coarse-grained black and white crystals are not indicative of the local bedrock, but rather have origins 20 miles to the northwest between Bangor and Ellsworth. A small pull-out on the left offers a photo opportunity, but for an up-close look at the rock, the trail up South Bubble is the only way.

### **BUBBLE ROCK OVERLOOK TO BUBBLE POND**

*No planned stops.*

At mile 18 is the Bubble Rock trailhead parking. The first half of South Bubble's trail winds through a forest of beech trees. Beech trees dominate along this trail in part because their roots are able to develop new saplings. The tree's smooth white bark has unfortunately made them a target for would-be carvers. Initials permanently blazed into the bark increase the tree's susceptibility to potential diseases. Logging practices in the late 1800s and the early 1900s, which reduced huge tracts of beech trees, are cited as one of the reasons for the extinction of passenger pigeons, once so numerous they blackened the skies. One of the main food sources for passenger pigeons, beech nuts, came from beech trees. Coupled with hunting, the loss of these forests led to the demise of the passenger pigeon. The loss of the passenger pigeon, a food source for peregrine falcons, may have been a contributing factor to the beginning of the decline of peregrine falcons well before the use of DDT.

Blue blazes painted on the granite mark trails above treeline. By roping off some areas on the summit, resource managers attempt to guide visitors' feet directly to Bubble Rock to avoid trampling fragile vegetation. Stunning views of Jordan Pond and the ocean beyond are found from the southern edge of South Bubble's summit.

The Park Loop Road continues through a mixed forest that includes stands of beech like those found on the South Bubble Trail. It curves between the saddle formed by Pemetic Mountain and the Bubbles. Right before the turn-off for Bubble Pond, Cadillac Mountain rises directly ahead.

### **BUBBLE POND**

*No parking for tour buses. Pond cannot be seen from the parking lot.*

#### **Location**

*Mile 19*

#### **Parking**

This is a small lot (20 spaces) with a narrow entrance. During July and August and

the peak fall color season, this parking lot is extremely congested. Parking may not be available. The pond is not visible from the Park Loop Road.

Bubble Pond is a lovely destination located in a small glacial valley flanked by Cadillac and Pemetic Mountains. Afternoon winds often howl between these two mountains and can create a wind tunnel effect, turning a boater's leisurely paddle into an interesting adventure. The pond is stocked with brook trout by the Maine Department of Inland Fisheries and Wildlife.

In the late 1800s, an outbreak of typhoid traced to local wells in both Bar Harbor and Northeast Harbor pushed the towns to consider the island's interior lakes and ponds as public water supplies. Bubble Pond, like Jordan Pond and Eagle Lake, is a public reservoir with swimming prohibited. A parking area along the pond's edge caused concern about the safety of the drinking water, so in the 1980s the lot was moved 200 feet away from the pond to keep oil, particulates from automobile exhaust, and other pollutants from running into the water.

A carriage road follows Bubble Pond's west side, offering access to the pond's rocky shore. It continues southward to Wildwood Stables and Jordan Pond. Across the Park Loop Road from Bubble Pond the carriage road leads to Eagle Lake. The carriage road bridge at the northern end of the pond has a span of almost 200 feet and is unique to the carriage road system as it is the only one made completely of rock, rather than reinforced concrete faced with cut stone.

### **EAGLE LAKE OVERLOOK**

*Passengers can stay on bus.*

#### **Location**

*Mile 20.1*

#### **Parking**

Parallel parking pull-off.

North of Bubble Pond, the road ascends above 436 acre Eagle Lake. A pull-out on the left allows visitors a chance to linger over the open views to the west. In the distance, the predominant bump is Blue Hill. Rising from Eagle Lake's western shore is Sargent Mountain. The Bubbles frame the lake's southern end. A six mile carriage road loop offers outstanding views of Eagle Lake and the surrounding mountains. The carriage road's western side climbs along the base of Sargent Mountain, while the eastern and northern sections are more level. A hiking trail follows along the lake's southern and southwestern shores.



Visiting artists in the mid-1800s painted the sublime scenery of this large lake, bestowing the name Eagle Lake upon it, in reference to eagles soaring above its clear waters. In the late 1800s, a small steamship plied these waters, transporting visitors to the base of Green Mountain (Cadillac) to ride the Green Mountain Cog Railway to the summit. Visitors arrived at Eagle Lake via buckboard and then took the 15-minute trip across the lake on the *Wauwinnet*. It was a short-lived venture, and after ten years, the *Wauwinnet* was sunk to the bottom of the lake.

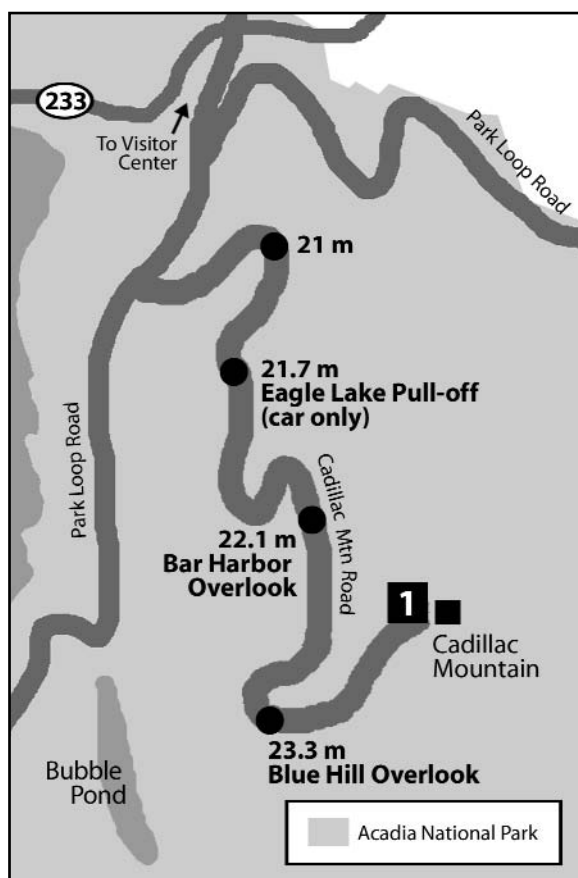
Each year, from late April through October, park staff and trained volunteers sample many of Acadia's 22 named lakes and ponds to characterize water quality conditions as part of the park's water monitoring program. Monthly monitoring allows biologists to detect changes in water chemistry that can result from increased nutrient input (from sources such as road run-off) and acidic precipitation. Currently, lake monitors collect data on surface temperature and water transparency at Eagle Lake. Monitoring records dating back to the early 1980s show that the water quality in Eagle Lake has remained fairly consistent during this period.

Long-term data records will help park staff detect water quality trends and identify pollution sources. Protecting Eagle Lake's water quality is especially important since it is Bar Harbor's municipal water supply. It is also enjoyed by many sportsmen, and is periodically stocked with togue, landlocked salmon, and brook trout by the Maine Department of Inland Fisheries and Wildlife.

The Park Loop Road continues on to intersect with the Cadillac Mountain Road at mile 20.4. If not going to Cadillac, continue straight until you come to the junction of the Paradise Hill spur road and the loop. Turn to the left if you are heading to the visitor center, Bar Harbor, or the western side of the island. Continue straight for the Park Loop Road.

## SECTION TWO – PARK SITES

### Chapter Ten – Cadillac Mountain Road and Summit



- 1** Cadillac Mountain Path  
 North Ridge Trail  
 West Face Trail  
 South Ridge Trail  
 Dorr Mountain Notch Trail





## Before You Go – What to Know Cadillac Mountain Logistics

### LOCATION

The Cadillac Mountain summit and Blue Hill Overlook are accessed from the Cadillac Mountain road, a 3-1/2 mile spur road off the Park Loop Road.

### AREA HIGHLIGHTS

#### **Cadillac Mountain Road**

The Cadillac Mountain Road offers outstanding views all the way to the summit.

#### **(LG/K) Summit Trail**

A half-mile paved path circles the summit. Interpretive signs highlighting geology, history, and surrounding landmarks are along the trail.

#### **(LG/K) Blue Hill Overlook**

Prior to the summit parking lot on the left hand side of the road is the parking area for this overlook. Expansive views to the northwest can be seen over the ledges. An interpretive sign explaining air quality is here.

#### **(LG/K) Ranger-led Programs**

During the summer and autumn, park rangers offer short walks and talks on the summit. In the autumn hawk watches are also offered.

### TIME ALLOTMENT

- *Cadillac Mountain Summit Road (Driving time with two stops):* 10 minutes
- *Restrooms and Gift Shop:* 15 minutes
- *Cadillac Summit Path:* 20 minutes with stops

### PARKING

- There are 3 pull-offs on the summit road that will accommodate tour buses and large recreational vehicles.
- The lot on Cadillac Mountain provides parking for about 150 cars. Buses and RVs should park parallel to the sidewalk after exiting the parking area, opposite the gift shop.
- The Blue Hill Overlook parking lot, located just before the Cadillac summit parking lot, has spaces for 40 vehicles.

## **FACILITIES**

There are flush toilets next to the Cadillac Mountain gift shop. The gift shop sells a small assortment of snacks, films, sunscreen, and souvenirs.

## **ACCESSIBILITY**

The Cadillac summit trail is rated easy, but it should be noted that the trail slopes downward and has a steep incline back to the summit. The gift shop and restrooms are accessible, although the gift shop is small with little room to maneuver. Views toward Bar Harbor from the parking lot are accessible as are views from the Blue Hill Overlook.

## **SAFETY**

- The summit road is narrow in places. Please remain alert and cautious around cyclists.
- The summit trail slopes downward and has a short climb back to the summit. Footing should be watched. Groups with seniors or those with difficulty walking should be aware that although the path is not long, it does dip and rise.
- During rain and fog, rocks can be exceptionally slippery and visibility at zero.
- A light jacket is always a good idea to have on Cadillac no matter the weather, as cooler temperatures are common.
- Groups traveling with children should be extra cautious. Children have a tendency to run across the ledges and climb over the rocks, easily falling. Numerous accidents have happened on Cadillac because of such activity.

## **TRAILHEADS AND TRAILHEAD CONNECTIONS**

For trail descriptions and distances see hiking fact sheets in the Recreation section. Four trails leave the summit following the four cardinal directions:

- *North Ridge Trail*
- *West Face Trail*
- *South Ridge Trail*
- *Dorr Mountain Notch Trail*



## **At a Glance – Cadillac Mountain**

### **SIGNIFICANCE**

Cadillac Mountain, at 1530 feet, is not only Acadia's highest mountain, but the highest mountain along the eastern seaboard of the United States. The only mountain in the park with access to the summit via a road, it is a place where park managers try to balance the National Park Service mission of "protect and preserve" with "enjoyment for all." From the summit, an Acadian panorama of mountains, islands, forests, lakes, shoreline, and ocean stretches to the horizon. To the north is the mainland. Bar Harbor and the Porcupine Islands lie to the east with Schoodic Peninsula in the distance across Frenchman Bay. To the west are the mountains of Dorr, Champlain, the Beehive, Gorham, and Huguenot Head; the Bowl, Otter Creek and Otter Cove, as well as outer islands. The view to the west is best seen from the Blue Hill overlook, where Eagle Lake and the western mountains of Acadia lie in front of the predominant "bump" of Blue Hill across Blue Hill Bay.

### **FAST FACTS**

- The mountain is named after Antoine Lamuet, a Frenchman who was granted land in the New World, including Mount Desert Island in 1688. Dubbing himself with a fake nobleman's title, the Sieur de la Mothe de Cadillac, he stayed in the area for only a short time. He went on to found Detroit.
- Originally called Green Mountain, the name was changed to Cadillac by George Dorr, the park's first superintendent, to reflect the history of the area.
- A cog railway up the mountain and a hotel on the summit were here in the late 1800s.
- Cadillac Mountain's summit landscape of subalpine plants and stunted trees comes not from being above treeline, but from harsh stresses of the climate and erosion.
- Acadia exceeds clean air standards for ground-level ozone at times during the summer. Particulate matter (smog) can obscure views.
- Cadillac Mountain is the first location in the country to see the sunrise from October 7 to March 7.
- Sunrise in the summer falls between 4:30am and 5:30am.

## **PROTECTING YOUR PARK – HOW YOU CAN HELP**

Remember to follow *Leave No Trace* principles. In particular:

- Cadillac's large volume of visitors leave their mark behind, no matter how careful they may be. The summit's plants, although able to withstand harsh weather conditions can fall victim to constant trampling. Visitors should remain on the paved trail. If need arises to go off, they should walk on exposed rock and not over plants.
- During summer afternoons and at sunset, the parking on Cadillac reaches peak capacity. Mornings on Cadillac are considerably quieter.
- Cigarette smokers seem to use Cadillac as an ashtray. Remind visitors to dispose of cigarette butts, and other garbage, properly. Pack it in, pack it out.
- To avoid detracting from visitor's enjoyment of the mountain, buses should turn off engines once parked.
- Remember your fellow visitor; quiet voices help everyone to appreciate the inspiration of the mountain.

## **HELPFUL INFORMATION – CADILLAC MOUNTAIN**

### **Fact Sheets:**

Raptor Migration and Hawk Watch 3-29  
Plant Groups of Acadia National Park 3-43  
Caring for Acadia's Native Plants 3-47  
Acadia's Common Plants 3-50  
Geographic Features 3-63  
Geology 3-66  
Downeast and Downwind – Air Quality 3-85  
Protecting Park Resources 3-88  
Park History 3-105

### **Appendix:**

Mountains (D)  
Glacial Geology and Geologic Glossary (D)



## **Background Information/Narrative Cadillac Mountain Road**

For centuries, people sought ways to reach the island's highest mountain for inspiration, sustenance, and spectacular panoramas. Footpaths marked the way for American Indians to reach their sacred mountain. Logging roads were built on its slopes for timber. In 1853, a federal survey site was located on its summit, and a rough-hewn road provided access. The Brewer family, who owned the mountain's land, widened the survey road so buckboards could travel its length. They also added a tollbooth and a small hotel called the Summit Tavern. In the late 1800s, a short-lived cog railway offered excursions for visitors and a larger hotel, The Summit House, provided accommodations.

These historic and various uses influenced park administrators to construct a quality road that tourism would benefit from. The assistant park service director in the 1920s stated, "...so that those who can not climb may get the opportunity to receive the inspiration and feel the exaltation of spirit that come with an hour spent on the breeze-swept hills with their superb views over sea and island, losing themselves in the distance." He also added that in his opinion, "no road should go to the top of any other mountain in the park."

Construction of the summit road would progress slowly. Opposition, lack of funds, varying opinions, and different contractors, not to mention the difficulties of grading, blasting, and building embankments, turned the venture into a ten year project. The first 4300 feet were completed in September of 1923, offering views of Eagle Lake and the Breakneck Ponds. The final grading to the summit was not completed until November 1, 1930. This last leg of construction was problematic due to the poor workmanship by the contractor. Serious landscape degradation due to inattention to appropriate blasting procedures and non-existent clean-up scarred the summit. Park officials, remembering the concerned voices of a decade ago opposing the road, put much effort into repairing the damage where possible. One of the marred areas became the parking lot, a much-needed addition to the final road, and the once-abandoned clean-up along the road-side was completed.

The final road work included widening some sections for viewing pull-outs, and surfacing the road with crushed pink granite similar to the original Jordan Pond-Eagle Lake road (known as Lower Mountain Road today). Despite some of the shortcomings, the end result was lauded as a remarkable piece of engineering, and was officially dedicated on July 23, 1932. The damage incurred by a careless contractor almost a century ago is still a lesson for park managers of today who try to balance the need for visitor services and enjoyment, with their prime mandate of protecting and preserving the park's natural resources.

The three-and-a-half mile summit road offers many opportunities for breathtaking views and a better understanding of the natural history of Acadia. The road begins in a mixed forest composed of hardwoods like striped maple, sugar maple, and red oak; post-fire trees like white birch, quaking aspen, and big tooth aspen; and conifers like red spruce, balsam fir, and white pine. The forest soon gives way to exposed rock ledges scattered with lowbush blueberry and sheep laurel. Some species of trees, like the oaks and maples, disappear almost entirely while red spruce, balsam fir, white birch, black cherry, and shadbush are found in increasingly smaller numbers. Their growth also becomes stunted at higher elevations. This change results from harsh exposure to winds, winter snow and ice, and an obvious lack of soil.

The second pullout on the right side of the summit road (mile 21.7 for cars only) overlooks Eagle Lake, Pemetic Mountain, the Bubbles, and Sargent Mountain. The U-shaped valleys and north-south trending rounded mountain ridges are evidence of Acadia's glacial legacy. One can visualize fingers of ice between the mountains receding northward after the granite ridges had been engulfed in ice. Another geologic feature much older than those created by glacial ice can be found a little farther up the road on the right. Exposed in a large road cut is a wide band of dark rock contrasting boldly with the coarse-grained pink granite. This is a diabase dike, formed beneath the Earth's surface when magma oozed between already present fractures in the older rock and cooled quickly.

There are numerous views toward Bar Harbor, Frenchman Bay, the Porcupine Islands, and Schoodic Peninsula. (Pull-offs at mile 21, and between mile 22.1 to mile 22.4). Bar Harbor is named to reflect its connection via a gravelly sand bar exposed at low tide to Bar Island. You might see someone driving across it! The Porcupine Islands, similar in appearance to their namesakes, were the hilltops of 6,000 years ago when Frenchman Bay was dry. Since that time, the land has slowly been sinking and the sea level rising.

Just before the summit (mile 23.3) the southern horizon opens to display a spattering of islands along the coast. The mountainous island furthest in the distance is Isle au Haut. Half of this large island is populated by a small year-round community while the other half is part of Acadia National Park. This remote island is accessible by mailboat from Stonington, a one-and-a-half hour drive down the coast. Five lean-to shelters are available for campers, but must be reserved in advance. To maintain the wilderness quality of this section of Acadia, the park service allows no more than 50 visitors a day.

At mile 23.4, to the left, is the Blue Hill Overlook. An air quality interpretive sign is at the overlook. At mile 23.6 is the main parking lot for the summit.





## **Background Information/Narrative Cadillac Mountain**

From atop Cadillac Mountain, all that is Acadia, from rocky mountain summits, a forest menagerie, and freshwater lakes, to jagged coastline and outer islands, is spread at one's feet. Silence, even in the presence of hundreds of other visitors, makes itself known in hushed tones. Overhead, birds float in thermal currents. The most spectacular flights come in autumn with the annual hawk migration.

Cadillac Mountain is the highest mountain along the eastern seaboard at 1,530 feet. It is named after a self-proclaimed French nobleman, Sieur de la Mothe de Cadillac, who was granted 100,000 acres including Mount Desert Island in 1688. He later founded the city of Detroit. Indians of the Wabanaki tribe considered this mountain sacred, as do their modern-day descendants. The first European to write about this summit and the others surrounding it was Samuel Champlain, who upon viewing this mountainous landmark from the sea in 1604 wrote: "The island is high and notched in places so that from the sea it gives the appearance of seven or eight mountain ranges. The summits are all bare and rocky. The slopes are covered with pine, fir, and birch. I called it the Isles De Monts Deserts."

Champlain's description is still accurate, the summits appearing barren of vegetation. Closer inspection shows the summit to be a mix of bare rock, pockets of alpine plants, and stunted trees. This plant mix is similar to the one found above treeline on much higher mountains, but Cadillac's height of 1530 feet is considered too low to be affected by the ecological conditions that high altitude bring. Instead Cadillac's summit environment, like some other mountains in the park, is the result of a lack of soil from frequent fires, wind, and run-off resulting in erosion, and a climate harsh with winter winds, snow, and ice.

The exposed rock provides an opportunity to read part of the island's geologic story. Peering closely at this granite, one can see flecks of white, pink, and grayish-black. This color mosaic is made from the individual minerals of quartz, feldspar, and hornblende. Four hundred and twenty million years ago, the origin of this rock was a molten mineral mix deep beneath the surface of the Earth. This magma plug oozed up through overlying rock, causing it to melt and collapse into the fiery solution. Once cooled, it solidified into granite. The crystal size of this granite lends a clue to how long it took the magma to cool. If you were unable to find any obvious crystals that would indicate a relatively quick cool down. Crystals of an increasingly larger size would indicate a slower cooling period. Eons of erosive elements eventually exposed the rock, setting the stage for what one day would become Acadia National Park's centerpiece.

Criss-crossing the rock are cracks and crevices, giving the granite its blocky appearance. Granite's propensity to fracture at 90 degree angles is a result of internal geologic pressure exerted prior to the exposure of the granite at the surface. Exposure to the elements, especially freezing and thawing, has expanded the joints into large obvious fractures. Exfoliation, the result of released pressure as overlying rock layers eroded lessening the weight on the granite, created horizontal cracks. Erosion over time has weathered these granite wrinkles.

Cadillac Mountain provides an ideal setting for sunsets. Many evenings, the mountain summit is dotted with people watching the sky show. After sunset a procession of lights snake down the mountain road. Not quite as many cars head up in the morning for sunrise. Cadillac Mountain competes with two other geographical locations in Maine—Quoddy Head on Maine's northeastern edge and Mars Hill, further inland to the north, to claim the first sunrise in the country. Because of seasonal variations, Cadillac Mountain sees the sun first from two weeks after the autumn equinox through the two weeks before the spring equinox. Those combined four weeks before and after the equinoxes give first sunrise honors to Quoddy Head. From the spring equinox to the autumn equinox the first sunrise in the United States is at Mars Hill.

In the late 1800s, some visitors could simply wake atop Cadillac Mountain (then called Green Mountain) to watch the sunrise—from a hotel. The Summit House, built in 1883 housed up to 50 guests and could serve 130 diners. Access came by foot or via the Green Mountain Railway, a cog railroad completed in the same year. Summer guests reached the base of the mountain via a steamer across Eagle Lake, and then boarded the passenger cars that were pushed up by a 10 ton locomotive. After paying \$2.50 fare, and a half hour travel time, visitors arrived at the summit—almost 3,000 in the first year. Both of these ventures did not last long, as the Summit House was razed in 1896 (the first one burned in 1884) and bankruptcy claimed the cog railway by 1889.

Today, Cadillac's visitation has grown exponentially, hosting many more visitors than other park summits. It is a well-worn mountain, in need of strong resource protection from those who love the mountain the most. Once on the mountain top, visitors are drawn by the scenery surrounding them, leaving the trail as they take in one view after another. The seemingly tough vegetation underfoot is often ignored, but attention must be paid as these plants may be more vulnerable than suspected. Summer offers recuperation from the harshness of winter on the exposed summit, but with high visitation, serious damage to these plant communities happens by the constant trampling of off-trail use. This leads to a higher rate of erosion removing more soil and thus adding more stress.

Research studies conducted on Cadillac, as well as on Pemetic and Sargent Mountains clearly show the damage done to these pockets of vegetation. Many of Acadia's mountain species at the edge of their geographical range could serve as important indicator species in examining the possibilities of global climate change, or to study their genetic diversity. Remaining on the trail is critical, and if one must go off the trail, one should choose a path over bare exposed rock rather than through plants or gravelly soil.

Three plant communities identified by their dominant species are on the summit: 1) the crevasse community of three-leaf cinquefoil and blueberry, 2) shrub community of sheep laurel, blueberry, and huckleberry, and 3) forest mix dominated by red spruce. Some rare plant species are known to live on Cadillac.

Another management concern, clearly illustrated from the summit of Cadillac, is poor air quality. Despite Acadia's federal listing as a Class I protected area (it is required by law to have the cleanest air in the country) healthful air quality standards sometimes fall short. At times, the view toward Blue Hill from Cadillac Mountain is almost obscured. Particulate matter causes the distant mountain to fade from sight. These episodes often correspond with unsafe measurements of ground-level ozone, a possible threat to both park vegetation and human health. Ozone is created by a chemical reaction between sunlight and nitrogen oxides, a by-product of burning fossil fuels. Acadia, although not a major source of these nitrogen oxides, is a recipient of air currents from urban centers like Boston and New York that skirt the downeast coast. During the summer, the ozone levels can be higher than at other times of the year because of the increase in sunlight. The result is a bath of chemicals and particulates along the Maine coast. Acadia issues alerts to let visitors know when the park has reached unhealthy levels of ground-level ozone.

Park air quality resource specialists monitor Acadia's air for both acidic and mercury deposition, visibility and fine particulates, UV-B changes to track potential thinning atmospheric ozone, and effects of ground-level ozone levels and their effects on vegetation and human health. This information is part of a nationwide monitoring program.